

LANL/PNNL Virtual Center for Chemical Hydrides and New Concepts for Hydrogen Storage

- **Thermodynamics**
- **Kinetics**
- **Recycle**
- **Weight/Volume Capacity**
- **Durability**

Investigate existing chemical hydrides and develop new materials and processes.

Critical Capabilities and Facilities Fundamental Science and Discovery

- **Synthesis**
- **Rapid Discovery**
- **Polymer Synthesis and Characterization**
- **Meso and microporous materials**
- **Materials Characterization**
 - Neutrons, spectroscopy, adsorption/desorption, surface science, thermochemistry
- **Catalysis and Chemical Transformations**
- **Theory and Computation**

Critical Capabilities and Facilities Materials Testing and Development

- **High pressure in-situ spectroscopy and diagnostics**
- **Fuel cell science and engineering**
- **Engineering science; Engineering data and testing**
- **Hydrogen storage engineering and testing**
- **Materials testing**
- **Science and engineering of aging**
- **Science-based Prediction**